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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,591	09/29/2003	Shin Koike	243161US0	9971
22850 7590 04/06/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER METZMAIER, DANIEL S	
			ART UNIT	PAPER NUMBER
			1712	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/06/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary

Application No.

10/671,591

Applicant(s)

KOIKE ET AL.

Examiner

Daniel S. Metzmaier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-11,14-16 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-11,14-16 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.*

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-4, 6-11, 14-16 and 19-22 are pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is known that the water activity is dependent on the temperature. It is unclear how and at what temperature applicants are determining the water activity for the compositions.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4, 6-11, 14-16 and 19-22 are rejected under 35 U.S.C. 103(a) as obvious over Kao Corporation, EP 0 402 090 A2. Kao Corporation (abstract; page 1, line 4; page 2, lines 35 et seq; page 3, lines 4-8; page 4, lines 8-11, 23-34, and 46-49, particularly lines 33 and 48; page 7, lines 3 et seq; examples and claims) disclose oil-in-water emulsions employing diglycerides at a concentration reading on the claimed range of 30 to 90% by weight of the oil phase and having unsaturated fatty acids in a concentration of 70 % or more, preferably 80 % or more of the diglycerides. Kao Corporation (page 4, line 33) discloses the incorporation of sugar and (page 4, line 48) clearly contemplates foams by the disclosure of at least whipped cream.

Kao Corporation (column 3, lines 6-8) discloses the preferred use of di-cis-unsaturated diglycerides at a concentration of 70 % or more. Kao Corporation (abstract; page 2, lines 42-45; page 4, lines 23-34; page 6, lines 37 et seq; examples and claims) disclose the use of emulsifiers and proteins to improve taste and stability.

The particle size and the specific gravity would have been expected since the particle sizes are conventional for edible emulsions and the gravity is at or near the upper end-point of the claimed range. Any whipped air, which is clearly disclosed by the characterization as whipped cream, would clearly reduce the specific gravity with the claimed range. The claimed *trans* fatty acid content would have been inherent to the compositions since non-hydrogenated oils are commonly found in the *cis* form and the Kao Corporation references discloses the preferred high concentration of the *cis*

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form. The limitation of 0 to 20% saturated fatty acids is clearly found in the Kao Corporation disclosure (page 4, lines 12-15 and Table 1) of the use of natural vegetable oils and their mixtures including rapeseed oil (i.e., canola, SAFA ~ 6-7%) and corn oil (SAFA ~ 13 %). Other vegetable oil contemplated by Kao (page 4, lines 12-15) include safflower (SAFA ~ 6 %), olive oil (SAFA ~ 14), soybean oil (SAFA ~ 14 %), sunflower oil (SAFA ~ 11 %), and sesame oil (SAFA ~ 14 %) among others.

To the extent the Kao reference differs from the claims in the sufficiency of disclosure of a single composition explicitly setting forth each of the claimed limitations or the *trans* fat content and specific concentrations, Kao discloses oil-in-water emulsions formed with an edible oil advantageously having rich flavor and lower fat content. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the components within the teachings of the Kao reference for the advantageous use in making edible products.

The Kao reference (see at least page 7, lines 20-25 and lines 32-39) discloses concentrations reading on the claimed ranges for the oil and aqueous phases. Since the sugar is based on the aqueous phase, the 10 parts sugar to 90 parts emulsion appear to correspond to about 18 % by weight of sugar in the aqueous phase.

Furthermore, see also MPEP 2144.05(I) wherein it sets forth, "A *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. ***Titanium Metals Corp. of America v. Banner***, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)."

It is well known in the food art to whip air into compositions to reduce the cost and calories thereof. Applicants have not shown the compositions commensurate in scope with the claims to be patentably distinguished and/or unobvious in view of the Kao reference.

The particular fats and glycerides are disclosed at page 8, lines 6 et seq of the Kao reference.

Claim 22 sets forth the water activity of the composition. Since the water activity is dependent on the components and the compositions are substantially the same except for the concentrations, the water activity of the compositions would have been expected to be the same or substantially the same for the prior art compositions of Nomura et al and those claimed. It is further noted that the water activity is dependent on the temperature and as now claimed appears to be open to variation.

6. Claims 1-4, 6-11, 14-16 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kao Corporation, EP 0 402 090 A2, in view of Ono et al, US 5,962,058, and Lichtenstein et al, *Effects of Different Forms of Dietary Hydrogenated Fats on Serum Lipoprotein Cholesterol Levels*, The New England Journal of Medicine, Vol 340, (6/24/1999) No. 25, pp 1933-1940. Kao discloses edible oil-in-water emulsions as set forth above and incorporated herein. Kao Corporation (abstract; page 2, lines 35 et seq; page 3, lines 4-8; page 4, lines 8-11, 23-34, and 46-49, particularly lines 33 and 48; page 7, lines 3 et seq; examples and claims) disclose oil-in-water emulsions employing diglycerides at a concentration reading on the claimed range of 30 to 90% by weight of the oil phase. Kao Corporation (page 4, line 33) discloses the incorporation of

sugar and (page 4, line 48) clearly contemplates foams by the disclosure of at least whipped cream. The Kao products are characterized as oil-in-water emulsions formed with an edible oil advantageously having rich flavor and lower fat content useful in a number of edible products including whipped creams.

To the extent the Kao reference differs from the claims in the sufficiency of disclosure of a single composition explicitly setting forth each of the claimed limitations, Ono et al discloses foamable emulsions for whipped products employing oils having a high degree of saturated fatty acid components. Ono et al further exemplifies the use hardened oils, which are known to produce undesirable trans fats.

The Kao reference (see at least page 7, lines 20-25 and lines 32-39) discloses concentrations reading on the claimed ranges for the oil and aqueous phases. Since the sugar is based on the aqueous phase, the 10 parts sugar to 90 parts emulsion appear to correspond to about 18 % by weight of sugar in the aqueous phase.

Furthermore, see also MPEP 2144.05(I) wherein it sets forth, "A *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. ***Titanium Metals Corp. of America v. Banner***, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)."

Lichtenstein et al teaches the *cis* fatty acid configuration is desirable to the *trans* forms since the *trans* forms have detrimental effects on the serum lipoprotein cholesterol levels.

These references are combinable because they teach whipped edible products. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the edible oil formulations of Kao in the formulations of Ono et al for their advantageous low fat and advantageous unsaturated *cis* fats.

Claim 22 sets forth the water activity of the composition. Since the water activity is dependent on the components and the compositions are substantially the same except for the concentrations, the water activity of the compositions would have been expected to be the same or substantially the same for the prior art compositions of Nomura et al and those claimed. It is further noted that the water activity is dependent on the temperature and as now claimed appears to be open to variation.

Response to Arguments

7. Applicant's arguments filed 12 January 2006 have been fully considered but they are not persuasive.

8. Applicants (page 7) assert the Kao (Nomura et al) reference is a diglyceride mixture concerned with increasing melting point of 20°C or below rather than improving the sweetness of the edible composition. This has not been deemed persuasive since both the prior art references and the instant application are directed to the same utilities, i.e., edible compositions. Furthermore, the rationale may be reasoned from common knowledge in the art and the rationale for motivation may be different from applicants'.

Kao (Nomura et al) is directed to (page 3, lines 21 et seq) compositions that have excellent rich fatty savor and contemplates lower oil phase compositions. Since the compositions are oil-in-water emulsions, i.e., the aqueous phase is the continuous

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phase, they are generally known to be dilutable by the continuous phase to an upper threshold limit based on packing of the dispersed phase.

Applicants have not shown the slight variations in concentrations to be unobvious in view of the broader disclosure in the Kao (Nomura et al) reference (see at least page 7, lines 20-25 and lines 32-39) to concentration s reading on the claimed ranges.

Applicants (page 8) assert the example that exemplifies the foamed emulsion containing a sugar at 10 parts to 90 parts of the emulsion. Since the aqueous phase is 55.2 % of the emulsion (according to applicants' arguments) that equates to about 18 % of the aqueous phase. Applicants further assert the oil phase is 40.5 rather than the claimed upper limit of 35 % and the aqueous phase is 55 % rather than the lower limit of 65 % claimed. This disregards the remaining disclosure. All disclosures in a reference must be considered for what it fairly teaches those of ordinary skill in the art, not just preferred embodiments or specific working examples.

Furthermore, see also MPEP 2144.05(I) wherein it sets forth, "A *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. ***Titanium Metals Corp. of America v. Banner***, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)."

9. Applicants comments regarding the secondary references have not been deemed persuasive and were addressed in the Office Action mailed 17 Oct. 2006.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM